

### Remarks

Reconsideration of the present application is respectfully requested.

The indication that claims 23 and 24 would be allowable if rewritten is acknowledged with appreciation.

The objection of claims 9 and 19 under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim is believed overcome by the amendments to claims 9 and 19. Again, the point of this objection is not clearly understood. To the extent of the understanding, those claims were amended. However, those amendments are believed not necessary, and should not be considered as any disclaimer or limitation.

The rejection of claims 1-9 under 35 USC 112, first paragraph, is respectfully traversed. The Office Action contends "[s]ince, the specification does not enable the phase/frequency comparator having the claimed scope, i.e. it does not enable any and every means/or element for performing the recited function such as generating a phase error responsive to a transition location signal." Noticeably absent is any support for this contention, such as the USC, CFR, MPEP or case law.

To illustrate the incorrectness of that contention, a related section in the MPEP will be discussed. MPEP 2164.08(a) states:

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

That MPEP section is not applicable for at least two reasons. First, claim 1 is not written in the means-plus-function format. Second, claim 1 is a comparator that generates a phase error (recited function). However, claim 1 also recites the feature "responsive to a transition location signal." That feature excludes any and every means/or element for performing the recited function of generating a phase error. Therefore, the reasoning of MPEP 2164.08(a) is not applicable.

The Federal Circuit has explained the enablement requirement. In *Chiron Corp. v. Genentech Inc.*, 70 USPQ2d 1321, 1325 (Fed. Cir. 2004), the court discussed enablement related to a continuing application's priority claim to a related, previously filed application. The court said the following:

Moreover, the prior application must enable one of ordinary skill in the art to practice "the full scope of the claimed invention." *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993). Clarifying this principle, this court has explained: "That is not to say that the specification itself must necessarily describe how to make and use every possible variant of the claimed invention, for the artisan's knowledge of the prior art and routine experimentation can often fill gaps, interpolate between embodiments, and perhaps even extrapolate beyond the disclosed embodiments, depending upon the predictability of the art." *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1244 (Fed. Cir. 2003).

(Emphasis added.) Taking into account that the enabling disclosure of the specification must be commensurate in scope with the claim under consideration, the specification of the present invention enables one skilled in the art to generate a transition location signal. Furthermore, nowhere in the specification of the present invention is there any disclosure that the *structure* disclosed is necessary to the claimed invention. And the claimed invention is in a predictable art. See *In re Fisher*, 427 F.2d 833, 839 (CCPA 1970) (the scope of enablement varies inversely with the degree of unpredictability involved.). Thus, there is no enablement violation of claim 1.

The rejection of claims 21 and 22 under 35 USC 112, first paragraph, is respectfully traversed. The Office Action contends those claims are not enabled. That is incorrect; see the specification of the present invention at page 7, lines 11-23. Also, the Office Action's statement that "based on the Applicant's arguments filed on 9/24/04 the step of calculating the phase difference (308 in instant Fig. 3) is not essential..." That statement is incorrect. The previous arguments filed on 9/24/04 stated that the Office Action failed to meet its burden of showing the elements as being essential. Without meeting that burden, the rejection was unsupported and improper.

In addition, this rejection of claims 21 and 22 under the first paragraph of §112 was not made in the previous Office Action. Since those claims were not amended, the Applicant did not have a fair opportunity to address this matter. As such, this Office Action is improperly deemed

final. **IT IS RESPECTFULLY REQUESTED THAT THE FINALITY OF THE PRESENT OFFICE ACTION BE REMOVED, AND ANOTHER OFFICE ACTION BE ISSUED.**

The rejection of claims 1, 8 and 9 under 35 USC 112, second paragraph, as being incomplete for omitting essential elements is respectfully traversed.

For this rejection, MPEP 2172.01 states “a claim which fails to interrelate essential elements of the invention as defined by the applicant(s) in the specification may be rejected under 35 USC 112, second paragraph.” (Emphasis added.) Focusing on the emphasized portion of that quote, the present Office Action fails to provide any objective evidence that the elements listed in this rejection of claims 1, 8 and 9 are essential elements of the invention as defined by the applicant(s) in the specification. That failure means that the Office Action has not met the burden of supporting this rejection. As this rejection is not properly supported, claims 1, 8 and 9 are definite.

Moreover, that quotation above deals with a second paragraph rejection when a claim fails to **interrelate** essential elements of the invention. Yet this rejection contends that claims 1, 8 and 9 are incomplete for **omitting** essential elements. According to MPEP 2172.01, this “omission” rejection should properly be applied under the first, not second, paragraph of §112. For this reason alone, this rejection is unsupported and incorrect.

The rejection of claims 2-9 under 35 USC 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements is overcome by the amendment to those claims.

The rejection of claims 10-19 under 35 USC 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between necessary structural connections is respectfully traversed.

First, MPEP 2172.01 states “a claim which fails to interrelate essential elements of the invention as defined by the applicant(s) in the specification may be rejected under 35 USC 112, second paragraph, for failure to point out and distinctly claim the invention.” That statement in MPEP 2172.01 is not the same as the rejection statement “as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between necessary structural connections.” Since that rejection statement is not supported by

MPEP 2172.01, it is respectfully requested that the next Office Action provide any statute, rule or case opinion that supports that statement.

Second, "as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between necessary structural connections" is incomprehensible. It is respectfully requested that the next Office Action explain what that statement means.

Third, MPEP 2172.01 states "a claim which fails to interrelate essential elements of the invention as defined by the applicant(s) in the specification may be rejected under 35 USC 112, second paragraph." (Emphasis added.) The present Office Action fails to provide any objective evidence that the alleged "essential structural cooperative relationships of elements" and "necessary structural connections" of claim 10 are "essential elements" of the invention as defined by the applicant(s) in the specification. That failure means that the Office Action has not met the burden of supporting this rejection. As this rejection is not properly supported, claims 10-19 are definite.

The rejection of claims 1, 2, 7, 20, 25 and 26 under 35 USC 102(e) as being anticipated by Staszewski et al. is respectfully traversed.

Claim 1 features "generates a phase error responsive to a transition location signal." Claim 20 features a numerical phase difference value that is generated responsive to a signal that corresponds to a transition location of the first signal.

During examination, claims are to be given their broadest reasonable interpretation consistent with the specification, and claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. See *In re American Academy of Science Tech Center*, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004). (Emphasis added.)

The specification of the present invention discloses at page 7, lines 3-10, the following:

The output of N-bit parallel latch 302 is thus a snapshot of the progress of input signal 301 through N-bit tapped delay line 300 over one cycle of reference clock signal 303. This snapshot is fed into N-bit edge detect circuit 304, which is described in more detail in FIG. 4. N-bit edge detect circuit 304 outputs a single bit at the transition point of a falling edge (or rising edge, depending on the design) in the snapshot provided by N-bit parallel latch 302. This signal bit may be referred to as a transition location signal.

Thus, the specification discloses a separate meaning for a snapshot and a transition location

signal. Given that difference, the Office Action is incorrect in concluding that “the snapshot can be seen as transition location signal.” This error is based on the Office Action’s misapplication of the fundamental rule set forth above that claims are to be given their broadest reasonable interpretation consistent with the specification. In considering that entire rule, the separate meanings attributed in the specification to a snapshot and a transition location signal show that the Office Action’s conclusion that “the snapshot can be seen as transition location signal” is erroneous. Claims 1 and 20, then, are not anticipated because this applied reference does not identically show a transition location signal. Accordingly, claims 2, 7, 25 and 26 are also allowable due to their respective dependence on allowable claims 1 and 20.

The rejection of claims 8 and 18 under 35 USC 103(a) as being obvious over Staszewski et al. in view of Brachmann et al. is respectfully traversed. Claim 8 depend from allowable claim 1. Claim 1 is not anticipated by Staszewski et al. Brachmann et al. do not overcome the deficiency of Staszewski et al. In addition, there is no objective evidence of any suggestion in these references, either alone or taken together, that a skilled artisan would understand the missing features of claim 1 to be taught or suggested. Therefore, claim 1 is not obvious and is allowable over these two applied references. For the same reasons and due to its dependency, claim 8 is also allowable.

Claim 18 depends from claim 10. The Office Action does not apply Staszewski et al. or Brachmann et al. to claim 10. Because of that, it is unknown how Staszewski et al. and Brachmann et al. are applied to claim 18. Therefore, this rejection of claim 18 is not supported. Claim 18 is allowable.

The rejection of claims 10, 11 and 16 under 35 USC 102(e) as being anticipated by Perrott et al. is respectfully traversed.

Claim 10 features encoding circuitry. The encoding circuitry is to be given its broadest reasonable interpretation consistent with the specification. Claim 13 recites that the encoding circuitry includes an edge detector and a weighted encoder. Without limiting the encoding circuitry of claim 10 to include both those claim 13 features, both will be discussed for this rejection.

The edge detector is disclosed in the specification at page 7, lines 7-10 as:

N-bit edge detect circuit 304 outputs a single bit at the transition point of a falling edge (or rising edge, depending on the design) in the snapshot provided by N-bit parallel latch

302. This signal bit may be referred to as a transition location signal.

The weighted encoder is disclosed in the specification at page 7, lines 11-13 as:

Weighted encoder 306 converts the output of N-bit edge-detect circuit 304 into a numerical phase difference value that reflects the phase difference between input signal 301 and reference signal 303.

One skilled in the art will recognize that the A/D converter in Perrott et al. is not identical to either the edge detector or the weighted encoder. Because of that deficiency in Perrott et al., claim 10 is not anticipated and is allowable. Claims 11 and 16 are also allowable due to their dependence on allowable claim 10.

### Conclusion

This Reply is believed to be responsive to all points raised in the Office action. Accordingly, prompt allowance and passage of the application to issue are earnestly solicited. Should the Examiner have any remaining questions or concerns, he/she is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

Seagate Technology LLC  
(Assignee of the Entire Interest)

2/15/05  
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